

Outcome of Evidence Review Group on Border Malaria



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Malaria Policy Advisory Committee, Geneva, Switzerland, 17-19 October 2018

Global **Malaria** Programme

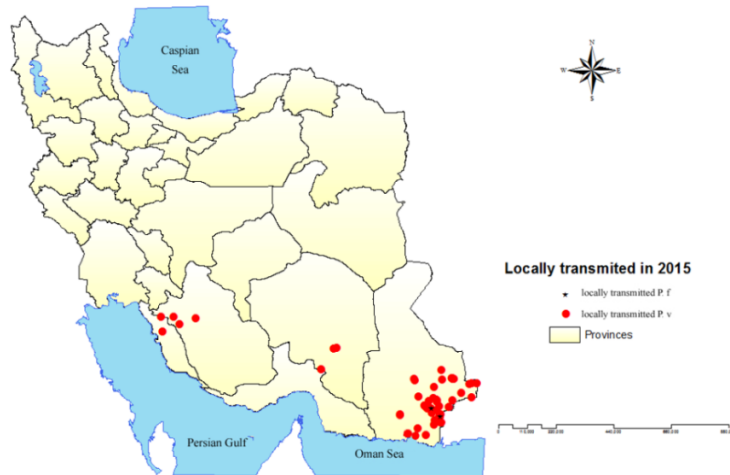


**World Health
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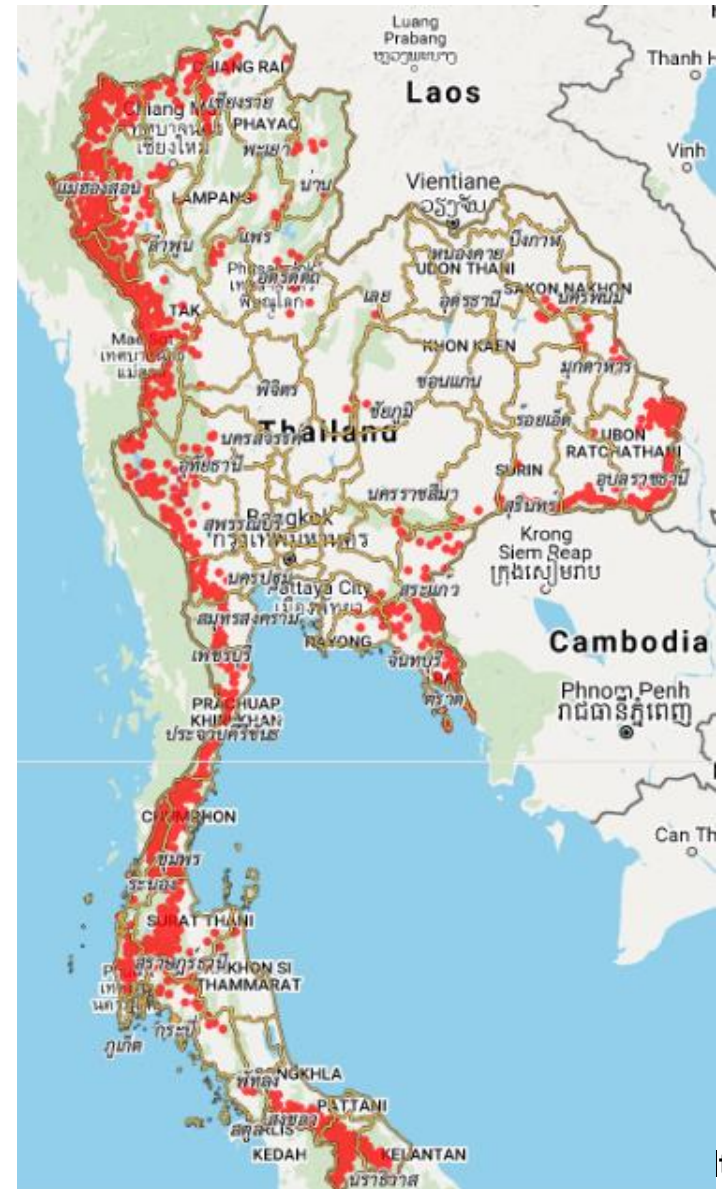
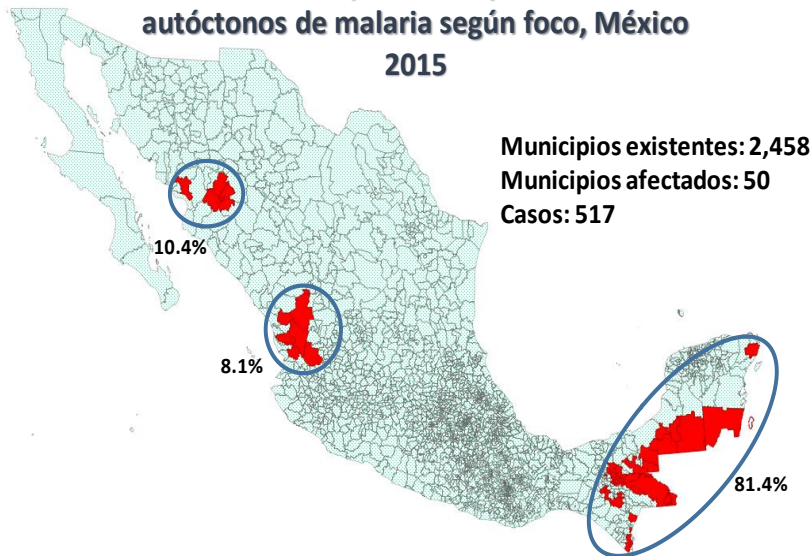


- Border malaria is a frequently cited challenge to malaria elimination
 - 1st Global Forum of malaria eliminating countries, mentioned by 15/20 countries
- Countries nearing elimination often find their last few cases occurring along international borders with countries that have not achieved substantial reductions in malaria transmission.

Last few cases occurring along international borders



Distribución por municipio de casos autóctonos de malaria según foco, México 2015





- Persons who crossed uncontrolled land borders present the greatest threat of the re-introduction of malaria. **Border malaria cannot be solved unilaterally.**

Prevention of the Re-introduction of malaria,
meeting report, WHO, 1967

- Certification of malaria elimination: Prerequisites for preventing re-establishment of malaria transmission: inter-country information- sharing and **functional border coordination**, where relevant

----- WHO, Elimination Framework, 2017



- To review published and grey literature on border malaria and to summarize the factors that might influence malaria transmission in border areas.
- To review and comment on case studies and to make specific recommendations on mitigating different factors that hinder the progression of malaria elimination at borders.
- To evaluate the effectiveness of current tools or interventions targeting border malaria.
- To draw evidence from other global/eradication initiatives where cross-border risks have played an important role in disease transmission (polio, measles, Guinea worm, lymphatic filariasis/onchocerciasis).
- To define a research agenda for border malaria and an action plan for the next two to three years.



- Literature and grey literature
 - Including MESA review on research projects relevant to border malaria
- Five case studies
 - Namibia and Angola
 - Myanmar and China
 - Bhutan and India
 - Dominica Republic and Haiti
 - Saudi Arabia and Yemen
- Experiences and lessons from other diseases
 - Polio
 - Onchocerciasis
- Border malaria posts
 - China-Myanmar border
 - GMS
 - E8



Cross border malaria

Malaria transmission associated with the movement of individuals or mosquitoes across borders (*WHO malaria terminology, 2017*)

Imported cases

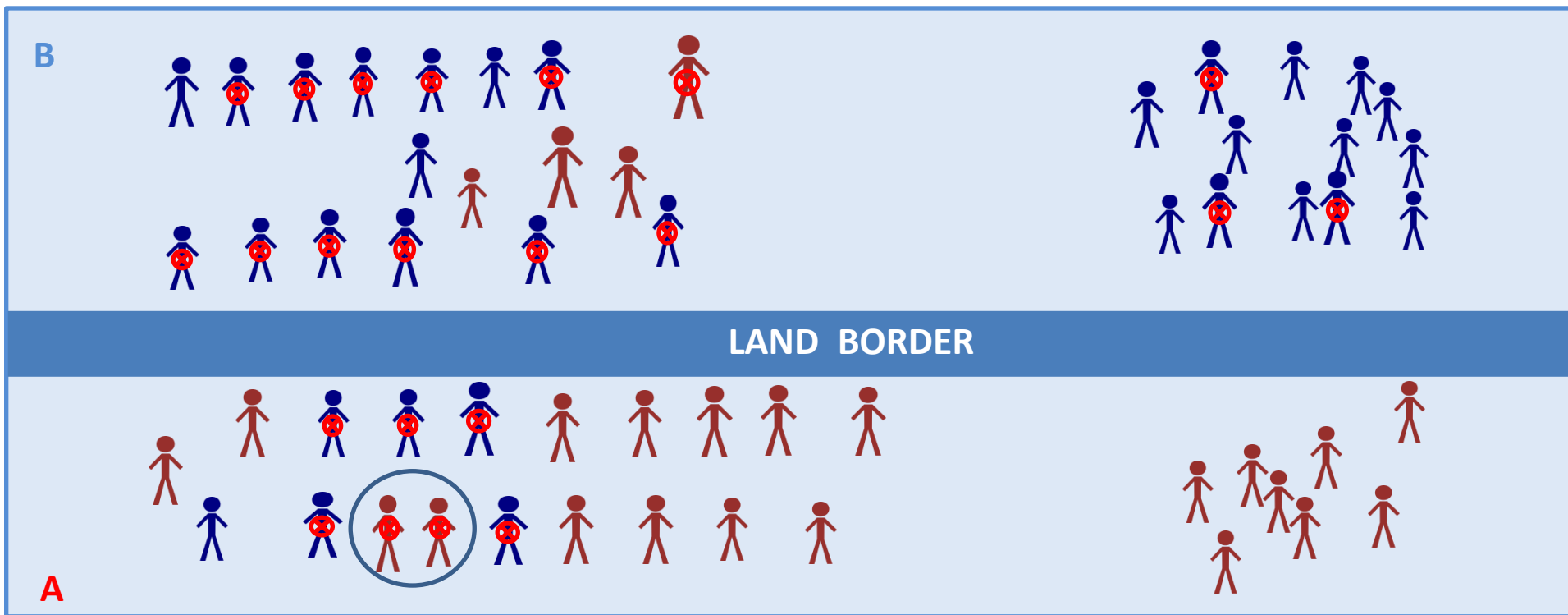
Malaria case or infection in which the infection was acquired outside the area in which it is diagnosed



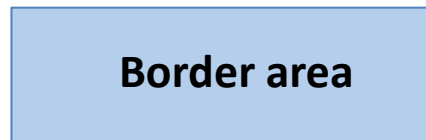
Border malaria

- refers to malaria transmission or potential for transmission that takes place across or along international land borders shared by two or more countries.
- Border malaria can extend up through the adjacent administrative areas along the international border, or up to a specified distance from an international border.

Concept of border malaria -- illustration



Border



Border area



People of nationality B



People of nationality A



Cases



Transnational malaria

- refers to imported cases of malaria that cross a border or enter a country through air or sea ports, but do not necessarily affect transmission within the border area per se.



- Political unrest, conflict (international or internal), social security.
- Social and economic development lags behind other areas.
- Remote, poor, difficult terrain
- Relatively weaker health system, lower surveillance.
- Lack of access to health care (malaria service)
- Transmission differential
- **Porous border, large population movement across border**
- **Difficulties in international coordination/border collaboration**, border is not a priority for the country with higher transmission



1. Border malaria is a complex and multi-faceted issue. Multiple factors can contribute to malaria transmission in border areas

- Border malaria is often an issue of a transmission focus that crosses an international border
 - Share a common ecology
 - Related human populations, frequent mixing malaria parasites and vectors
- Control and prevention activities are not equal or optimized throughout the focus
 - Differences in national malaria policies
 - Difference in coverage of interventions
 - Quality of implementation





- Border malaria may also occur due to
 - Border area is normally remote, neglected.
 - Political unrest
 - Slow social and economic development
 - Weak surveillance and response systems
 - Lack of access to health service or limited access to health care

There is not a one-size-fits-all approach to address border malaria.



2. Planning and management (1)

- Countries should consider the problem of malaria along international borders early;
- Implementation of strategies at the periphery is often suboptimal – but they hold the key to success. More resources should be directed to border areas to ensure that prevention, diagnosis, treatment, surveillance and response are of high quality.
- Border malaria should not be recognized as only a technical issue: it is also a political, social and economic development issue.



2. Planning and management (2)

Border malaria analytical framework

- Political context of the border
- Geography, environmental and natural features
- Population movements
- Health service availability and access
- Malaria ecology
- Malaria interventions
- Existing cross-border collaborations



2. Planning and management (3)

Cross-border collaborations

- Data sharing and coordination : Informal data sharing and coordination at the border district level is more efficient and effective.
- Joint mapping and risk assessments
- Conduct joint mapping of health services and risk assessments to inform responses best-suited to the situation and to optimize activities.



3. Interventions and strategy

- Current interventions are appropriate but may need to be coordinated
- Based on joint risk assessment, a joint action or response may be needed
- Consider the concept of "Special Intervention Zone"



- Scaling up cross-border coordination and collaboration with neighbouring countries in order to treat these areas holistically and fairly.
- Follow closely with the polio programme.



- Further development of the border malaria analytic framework
- Publish case studies
- Pilot the analytic framework in a few E2020 countries with border malaria



1. Is there value in separating out the concepts of border malaria and transnational malaria, to clarify the different solution sets for these problems?
2. Comments on border malaria analytic framework: "Are there additional elements or methodologic approaches to the border malaria analytic framework that should be considered?"



Thank you!